Georgia's Pre-K Program and Best Practices
Math Development Continuum

PRE -K CONTENT STANDARD	DEVELOPS FIRST	DEVELOPS NEXT	EXTENDING
MD 1- CHILDREN WILL BEGIN TO DEVELOP AN UNDERSTANDING OF NUMBERS			
MD 1A - COUNTS BY ROTE	• Uses names for numbers • Performs rote counting 1 to 5	• Performs rote counting 0 – 10 • Counts backwards from 10 • States the number that comes next after a given number (one more than)	• Performs rote counting 0 – 20 (and beyond) • Counts on from a given number (i.e. 5,6,7,8…) • Skip Counts by 10's (to 50) and 5's to 20
MD 1B ARRANGES SETS OF OBJECTS IN ONE-TO-ONE CORRESPONDENCE	• Matches 2 sets with 1-5 objects	• Matches 2 sets with 0 – 10 objects •Determines if one set has more, less or the same as the other set	• Matches 2 sets with 10+ objects • Determines how many more are needed to make both sets the same
MD 1C COUNTS OBJECTS USING ONE-TO-ONE CORRESPONDENCES	• Counts sets of 1-5 objects using one-to-one correspondences (such as the ten frame) • Organizes collection of objects by lining up before counting	• Counts sets of 1-10 objects using one-to-one correspondences (such as the ten frame) • Organizes collection of objects by lining up or grouping before counting • Understands that numbers (0-10) always represent the same quantity regardless of the physical appearance of the objects in the set	• Counts sets of objects larger than 10 • Organizes larger sets of objects for counting (i.e. collections of five or ten) • Understands order irrelevance (i.e. objects can be counted in any order)
MD 1D COMPARES SETS OF OBJECTS USING LANGUAGE	• Matches 2 sets using one-to-one correspondence	• Describes sets as having more, less, same as/equal	• Solves simple addition and subtraction number stories (less than 10) by joining or removing objects

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MD 1E - BEGINS TO UNDERSTAND CONCEPT OF PART AND WHOLE USING REAL OBJECTS	• Shows an initial awareness that a whole can be divided into parts or portions	• Can divide a whole object into 2 equal pieces (fair shares)	• Begins to use vocabulary of half appropriately to describe part/whole situations
MD 1F - BEGINS TO IDENTIFY ORDINAL NUMBERS	• Can identify positions of first and last	• Can identify first, next, last	• Can identify positions of first, second, third, last
MD 1G - ASSOCIATES NUMERAL NAME WITH SETS OF OBJECTS	• Counts series of 0-5 objects in a group and tells the number (how many)	• Counts series of 0-10 objects in a group and tells the number (how many)	• Counts series of objects in a group (more than 10) and tells the number (how many)
MD 1H - BEGINS TO UNDERSTAND CONCEPT OF CURRENCY AS A MEANS OF EXCHANGE	• Identifies and compares coins by physical properties (color, size, markings)	• Begins to understand currency as means of exchange ("buy goods and services)	• Name coins and value
MD 1I - BEGINS TO UNDERSTAND THE CONCEPT OF ESTIMATION	• Uses numbers to predict and make guesses of amounts	• Begins to make reasonable estimates of small groups of objects using Benchmarks of 5, 10 (i.e. more than 5, more than 10)	• Shows an understanding of the relative size of numbers (5 is closer to 1 than to 20)
MD 1J - BEGINS TO RECOGNIZE NUMBERS	• 0-5 • Matches number symbol with the appropriate amounts	• 0-10 • Matches number symbol with the appropriate amounts	• 11-20 • Begins to recognize pattern of ones in higher decades (21, 22, 23, 24…)

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MD 2 - CHILDREN WILL CREATE AND DUPLICATE SIMPLE PATTERNS	• MD 2a - Copies a pattern using sounds or physical movements • Predicts what comes next when simple patterns are extended	• MD 2b - Recognizes and reproduces simple patterns of concrete objects •MD2d - Independently creates simple patterns using concrete objects • MD 2e - Spontaneously recognizes and identifies patterns in the environment	• MD 2c - Reproduces and extends patterns using concrete objects or drawings •MD 2d - Independently creates more complex patterns using objects or drawings •Translates a pattern into a different medium (shows that a clap-clap-snap pattern is the same as a square-square-circle pattern)
MD 3 - CHILDREN WILL SORT AND CLASSIFY	• Selects objects with a specific characteristic ("Show me the red block") • MD 3a - Matches like objects Identifies and describes similarities and differences of objects	• MD 3b - Sorts objects using one characteristic (size, color, shape, texture, function, etc) • Identifies sorting criteria/rule for 2-3 pre-grouped sets (red shirts/blue shirts, large squares/small squares)	• MD 3c - Classifies objects using more than one characteristic (i.e. color and size, shape and color) • MD 3d - Sorts and classifies objects using self-selected criteria • MD 3e - Explains sorting or classifying strategy
3F - PARTICIPATES IN CREATING AND USING REAL AND PICTORIAL GRAPHS OR OTHER SIMPLE REPRESENTATIONS OF DATA	• Collects data about people, objects, events (boy/girl, lunch choice, scoop and sort)	• Collects data about people, objects, events and labels or describes the categories (boy/girl, lunch choices, favorite_____)	• Displays data using real objects or pictures •Understands and explains what a graph shows (tells the "story" of the graph)
MD 4 - CHILDREN WILL DEVELOP A SENSE OF SPACE AND AN UNDERSTANDING OF BASIC SHAPES			
4A - RECOGNIZES AND DESCRIBES BASIC 2 – D GEOMETRIC SHAPES (SQUARE, RECTANGLE, CIRCLE, TRIANGLE, DIAMOND, OVAL)	• Recognizes basic geometric shapes (circle, square, triangle) • Matches and sorts objects based on basic shape	• Begins to notice differences in geometric shapes (sides and corners, orientation) • Names basic geometric shapes • Recognizes basic geometric shapes in the environment	• Recognizes geometric shapes (2-D and 3-D) in the environment (and with difference orientations) • Describes basic characteristics of geometric shapes • Classifies shapes and real objects by shape

Pre-K Content Standard	Develops First	Develops Next	Extending
MD 4a - Recognizes And Describes Basic 3 – D Geometric Shapes (Sphere/Ball, Cube, Cone)	• Matches and sorts objects based on basic shape	• Begins to notice differences in geometric shapes (sides and corners, orientation) • Names basic geometric shapes • Recognizes basic geometric shapes in the environment	• Recognizes geometric shapes (2-D and 3-D) in the environment (and with difference orientations) • Describes basic characteristics of geometric shapes • Classifies shapes and real objects by shape
MD 4b - Uses Classroom Materials To Create Shapes		• Builds geometric shapes with classroom materials (blocks, straws, string, playdough)	• Begins to draw basic geometric shapes
MD 4c - Uses Language To Indicate Where Things Are In Space	• Understands basic positional and directional words (top/bottom, next to/ behind, in/out, etc) • Locates objects using basic positional and directional words • Correctly uses basic positional terms to identify location of objects	• Understands more complex positional, directional, and distance terms (above/below, under/beside, long/short, near/far) • Understand order (first, second, third) • Identify own position (line up, turn in a game, etc.) Physically demonstrates positional and directional terms	• Uses direction, location and position words spontaneously (giving directions to a partner, etc.) • Accurately duplicates an arrangement of objects or a drawing of shapes (orientation and position)

Pre -k Content Standard	Develops First	Develops Next	Extending
D 5 - Children Will Learn How To Use A Variety Of Non-Standard And Standard Means Of Measurement			
MD 5a - Associates And Describes The Passage Of Time With Actual Events **MD 5c - Measures The Passage Of Time Using Nonstandard Or Standard Measurement**	• Identifies instruments used for keeping track of time (watches, clocks, calendars, etc)	• Identifies between day, week, and morning, night • Realizes that some activities take longer than others • Recognizes time as a sequence of events that relate to daily life.	• Sequences daily events using time concepts (morning, afternoon, night, what you do first, next, …)
MD 5b - Uses Mathematical Language To Describe Experiences Involving Measurement	• Uses basic "compare" words in work and play (big/little, large/small, tall/short, fast/slow, heavy/light)	• Uses correct terms with attribute of measure (long/short when discussing length, fast/slow when discussing time, heavy/light when discussing weight	• Includes unit of measure with number (4 feet, 20 blocks, etc)
MD 5d - Measures And Compares The Length And Weight Of Objects Using Non-Standard Or Standard Measures	• Lines up objects to explore distance • Directly compares weight of two objects by feel	• Uses familiar discrete objects as measuring devices (foot length, hands, body length, unifix cube trains) • Directly compares weight of two objects by using simple balance scale	• Shows an increasing awareness of conventional measurement tools

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MD 5E - MEASURES THE VOLUME OF OBJECTS USING NON-STANDARD OR STANDARD MEASURES	• Explores volume by filling various size containers with rice, sand, water.	• Verbalizes comparisons of containers (more, less, same)	• Sequences containers by volume (least to most, etc)
MD 5G - ORDERS TWO OR MORE OBJECTS BY SIZE (SERIATION)	• Recognizes objects arranged in a series (size, length) • Places objects in order through trial and error	• Uses direct comparison to order two objects by size	• Uses direct comparison to order three or more objects by size